

# **In Search of the Organismic Valuing Process: The Human Tendency to Move Towards Beneficial Goal Choices**

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**ABSTRACT** We attempted to test Rogers' (1951) concept of the organismic valuing process (OVP) by assessing changes in peoples' goal choices over time. When changes occur, are they more or less random, or do people tend to move towards goals that are more likely to be beneficial, both for themselves and others? "Beneficial" goals were defined as goals typically associated with subjective well-being (SWB) and with prosocial behavior—specifically, we focused on the distinction between intrinsic and extrinsic goal contents (Kasser & Ryan, 1996). In three studies, participants tended to move towards intrinsic goals and/or away from extrinsic goals over periods ranging from 20 minutes to 6 weeks. These changes were not reducible to social desirability nor to the differing motives underlying differing goal contents, did not vary for persons of different value-types, and had not changed when participants were retested a third time. We conclude that people may have a positive bias toward changing their minds in directions most likely to be SWB enhancing.

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One of the most prominent concepts within humanistic psychology is that of the “organismic valuing process” (OVP). As originally discussed by Carl Rogers (1951), the OVP refers to peoples’ innate ability to know what is important to them, what is essential for a more fulfilling life. The presumption is that people automatically evaluate their experiences and actions to ascertain whether they are actualizing, and if they are not, a “nagging sense that something isn’t right” results (Carver & Scheier, 2000), which can motivate corrective action. Importantly, the OVP is conceived of as not only an ability to recognize one’s individual or selfish interests but also as an ability to know and choose what will simultaneously forward the interests of important others and of society as a whole. In the words of Rogers (1964), “It is characteristic of the human organism to prefer actualizing and socialized goals, when it is exposed to a growth-promoting climate” (p. 166). Thus, Rogers viewed the OVP as a universal or species-typical human adaptation that tends to promote growth and well-being, assuming conditions are reasonably supportive. Despite the pervasiveness of the OVP concept within humanistic and other branches of psychology, such as insight therapy and Jungian theory, it has been subjected to little empirical scrutiny. The purpose of the present research is to initiate such empirical examination.

The concept of an OVP is an appealing one, to be sure. But is there really such a thing? Given the salience of human misery and imperfections, perhaps the OVP is a hopelessly naïve concept—a product of wishful thinking and “Pollyanna” theorizing. Still, there are also reasons for supposing that such a skill might exist. First, most people, according to their own self-reports (Myers, 2000), are happy and feeling fairly-to-very satisfied with their lives and situations. This suggests that most people make reasonably good choices, overall, about what to do and strive for in their lives. Second, people have important resiliencies and strengths (Masten, 2001; Seligman & Peterson, *in press*), which are often ignored or overlooked in the rush to illuminate human frailties and errors (Sheldon & King, 2001). One of these strengths may be the potential to achieve congruence between conscious experience and underlying personality (Rogers, 1961), such that peoples’ explicit choices can match their implicit needs and preferences. Third, recent findings have demonstrated that, as people age, they strive more for internalized reasons and less for reasons of guilt or compulsion

(Ryff & Keyes, 1995; Sheldon & Kasser, 2001). Sheldon and Kasser argued that this is due, in part, to cumulative learning inspired by the OVP.

In the current research we tried to document the existence of an OVP by examining how people change their minds over time about what goals and values to pursue. Do people tend to reject motives that are less likely to be beneficial for a happy and fulfilling life and retain motives that are more likely to be beneficial? If so, then they may gradually alter their life-course in more organismically congruent directions (Sheldon & Kasser, 1995). Of course, it is easy to think of examples where this does *not* happen, that is, where people fail to chart a personally and societally beneficial life-course. However, it is also easy to think of examples of people acting honorably and responsibly and learning from experience when they do not. Although the latter cases do not immediately capture our attention, they may in fact represent the majority of cases (Masten, 2001).

The above reasoning suggests that in order to demonstrate the existence of an OVP, one must demonstrate the existence of a positive tendency to move towards the beneficial. But how should the beneficial be defined—beneficial to whom, and in what way? Indeed, these are dangerous, value-laden waters (Kendler, 1999). In this article, we assume that “that which is beneficial” is that which is associated with subjective well-being (SWB). SWB has the obvious property of indexing the extent to which the person has achieved or experiences happiness in his/her life, certainly an important issue for considering the OVP. Also, SWB is correlated with positive functioning in general (i.e. behavioral flexibility, creativity, and persistence; Lyubomirsky, King, & Diener, 2003), as well as with cooperative and prosocial behavior (Isen, 1999) and physical health (Salovey, Rothman, Detweiler, & Steward, 2000). Accordingly, SWB has been said to offer perhaps the most reasonable criteria available for assessing national, as well as personal, health and thriving (Diener & Suh, 2000).

In short, we assumed that the more “beneficial” types of motives are those that are associated with SWB. More importantly, we assumed that, if there is an OVP, it should prompt people to shift towards SWB-enhancing motives, to the extent that people shift at all. In contrast, if there is no OVP (or other positive biasing function), then we would expect any shifts to occur randomly, such

that there is no net movement toward either “beneficial” or potentially “problematic” motives. Consistent with our theorizing, we expected to find a SWB-relevant bias, such that people tend to move towards healthy motives and reject potentially less healthy ones.

To identify beneficial categories of motives, we drew from previous studies of personal goals and SWB. In particular, we focused on the distinction between “extrinsic” and “intrinsic” goal contents (Deci & Ryan, 2000; Kasser, 2002; Kasser & Ryan, 1993, 1996). Kasser and Ryan (1993, 1996, 2001) conceptualized intrinsic goals (such as emotional intimacy, personal growth, and societal contribution) as ones that tend to be inherently rewarding to pursue (Kasser, 2002). As people enact such goals, they tend to satisfy important psychological needs, such as those for autonomy and relatedness (Deci & Ryan, 2000; Sheldon, Elliot, Kim, & Kasser, 2001). Thus, strong valuing of such goals tends to be positively correlated with SWB (Kasser & Ryan, 1993, 1996). In contrast, extrinsic goals (such as material possessions, physical attractiveness, and social popularity) are goals that tend to be instrumental to other objectives, such as bolstering contingent self-esteem or seeking favorable social comparisons. Such activities may not as directly or as reliably satisfy psychological needs and may tend to distract individuals from activities that would be more satisfying. Thus, strong valuing of such goals tends to be negatively correlated with SWB (Kasser & Ryan, 1993, 1996; importantly, it is not the endorsement of extrinsic goals per se that predicts negative well-being, but rather, endorsing extrinsic goals *more strongly* than one endorses intrinsic goals). In the language of classic humanistic psychology, extrinsic goals more often involve a “having” or “deficiency” orientation, in which people are attempting to compensate for perceived personal inadequacies. In contrast, intrinsic goals more often involve a “being” or “growth” orientation, in which people are attempting to express personal meaning and enhance social feeling (Fromm, 1976; Maslow, 1987). In addition to being associated with SWB, relatively stronger intrinsic goal pursuit is also associated with prosocial behaviors such as helping others in daily life (Sheldon & Kasser, 1995) and cooperating with others in social dilemmas (Sheldon & McGregor, 2000; Sheldon, Sheldon, & Osbaldiston, 2000). Thus, the distinction between intrinsic and extrinsic goal contents is consistent with the

idea that the OVP involves more than sensitivity to narrow self-interest. Finally, factor analyses clearly support the *a priori* distinction between the two types of goals (Kasser & Ryan, 1996; Sheldon & Kasser, 1995).

It is important to note that we do not assume that pursuing extrinsic goals is immoral or inevitably dooms one to unhappiness—of course, they can be a necessary part of life. In fact, the extrinsic versus intrinsic content distinction is not the primary focus of this paper; instead, we merely wished to use content as a vehicle for testing whether there may be a positively biased OVP. Given the reliable associations between intrinsic versus extrinsic goal content and SWB, this seemed a reasonable approach. It is also important to note that some have argued that it is not the content of goals that is the crucial factor determining SWB, but rather, the motives that underlie goals (Carver & Baird, 1998; Srivastava, Locke & Bartol, 2001). In this view, extrinsic or “having” goals only negatively impact SWB because they are often associated with external, nonautonomous, or insecurity-based motivations. Although we agree that the “why” or motivation behind goals is of critical importance for health and well-being, this is not the whole story—the “what” or content of goals exerts a unique influence as well (Ryan, Sheldon, Kasser, & Deci, 1996; Sheldon, Ryan, Deci, & Kasser, *in press*).

### General Study Design and Hypotheses

We conducted three studies to explore the above proposals, each of which employed a repeated measures design to examine the stability of goal endorsements. These studies varied in the length of time between assessments, from mere minutes to six weeks, and also differed in the mode of presentation of stimuli. Our general hypothesis was that participants would tend to approach “beneficial” goals over time (i.e. intrinsic or autonomous goals, shown by prior research to be associated with SWB) and move away from “problematic” goals (i.e. extrinsic or nonautonomous goals, typically negatively associated with SWB). We expected this to be evidenced in terms of both biased voluntary revision of earlier ratings and choices and biased memory for prior goal ratings and choices.

To justify these choices of measure, it is necessary to further consider the nature of the OVP. According to Rogers, all humans spontaneously assess the likely value of a new stimulus for their actual health and development. However, some people may live in self-concepts that do not admit or allow access to such assessments—in other words, selves may be out of touch with organisms, such that they are not aware of the OVP, and thus do not base their decisions on the appropriate internal information (Sheldon, 2002). We argue that one way the organism can break through to influence decisions is by biasing cognitive processes, revised choice being one such process, and memory being another. Although revised choices may seem a better illustration of this positive change process than memory errors (which seem to bespeak distortion, dissonance, or defense), if we assume that the self may be mistaken in its choices and thus stands in need of correction by whatever means, then memory “errors” may sometimes represent opportunities for positive change. In other words, growth motivation may sometimes legitimately trump consistency motivation.

## STUDY 1

In Study 1 we examined the stability of intrinsic and extrinsic goal-endorsements over a six-week period. We hypothesized that participants would show enhanced endorsement of intrinsic goals and reduced endorsement of extrinsic goals from Time 1 to Time 2.

In Study 1 we also examined four supplementary issues. First, we examined an important variable that might supply an alternative explanation of the predicted results, namely, the social desirability of goals. It could be that people shift towards intrinsic goals and away from extrinsic goals not because of an OVP, but rather, because they know that intrinsic goals are more desirable to peers or parents or make them look better to the experimenter. Of course, peers' and parents' values are not necessarily inconsistent with participants' own needs and OVP. However, if presumed OVP effects are found to be reducible to these variables, readers might legitimately question our assumption that revised choices are based on organismic revaluations and implicit health considerations. We hypothesized that the biased-shift effect would not be reducible to social desirability.

As a second supplementary issue, we also examined three trait-level values constructs as potential influences on the ways that people change over time in their goal endorsements. Specifically, we assessed intrinsic versus extrinsic value orientation (Kasser & Ryan, 1993, 1996), cooperative versus competitive social value orientation (Kuhlman, Brown, & Teta, 1992; Liebrand, 1984; Sheldon, 1999; Van Lange, 1992), and horizontal collectivist versus vertical individualist cultural value orientation (Triandis, 1997; Triandis & Gelfand, 1998). We did this because it seemed possible that movement towards intrinsic goals and away from extrinsic goals only occurs for those who are already oriented towards intrinsic, cooperative, or collectivist values, an idea that is consistent with functional or “matching” perspectives upon motivational choices (Snyder & Cantor, 1998). To find such interaction effects would suggest that people simply prefer what they are used to, rather than being attracted by what is most likely to be personally and societally beneficial, as specified by the OVP concept. In contrast, finding that shifts towards intrinsic and away from extrinsic goals occur equally for all, regardless of their preexisting value orientations, would buttress our assumption that the OVP is a universal or species-typical adaptation (Geary, 1998; MacDonald, 1996; Rogers, 1964) that operates regardless of the person’s conscious value structure. Based on this assumption, we hypothesized that the predicted content  $\times$  time interaction would not interact with participants’ trait value-type.

As a third supplementary issue, we assessed participants’ judgments regarding goals a third time, six weeks following the second assessment. This was so that we could assess whether further change might occur. We thought this unlikely—after all, personality tends to be stable, and also, conditions are unlikely to be continuously supportive of positive change. Given this, we might not even expect prior change to be *maintained*, much less further increased—instead, after any fluctuation, participants should perhaps be expected to regress back to their starting point. In this light, we believed our case would be supported if we were able to find support for the hypothesis that positive change would be maintained at Time 3, as this would demonstrate that the positive effect is not transient and perhaps random after all, but instead, can persist for a reasonable length of time (see Sheldon & Houser-Marko’s 2001 study of the potential stability of well-being gains, for an example of similar reasoning).

As a final supplementary issue we measured SWB in Study 1, attempting to buttress our assumption that intrinsic goals would be associated with positive SWB, and thus may, in a sense, be more “beneficial.” Although prior research clearly documents these connections (Kasser & Ryan, 1993, 1996, 2001; Sheldon et al., 2001; Sheldon & Kasser, 1995), we reasoned that our arguments would be strengthened if we could document the connection in the current data.

## METHOD

### Participants and Procedure

Participants were members of a social psychology class at the University of Missouri, who participated in exchange for extra course credit. Two hundred and thirty-four participants completed an initial questionnaire packet containing the target goals (two intrinsic and two extrinsic), during a class session held at the beginning of the semester. This first questionnaire contained both the general intrinsic value orientation and social value orientation measures and also contained SWB measures. Six weeks later, 196 of the original sample completed a second questionnaire containing the four target goals again, allowing us to test our primary hypotheses. Six weeks later, 188 participants from the original sample, in a third questionnaire that also contained the cultural value orientation measure, rated the target goals again. In testing our primary hypotheses, we focus on the sample of participants with both Time 1 and Time 2 data ( $n = 196$ ).

### Measures

*Target goals.* Participants were presented with the following four prototypical goals: “Have many nice things,” “Be admired by many others” (representing materialism and popularity, both considered to be extrinsic goals), “Help those who need it,” and “Have people I feel very close to” (representing community contribution and emotional intimacy, both considered to be intrinsic goals). They rated “How important each goal is to you?” using a 1 (*not at all*) to 5 (*very*) scale. We also assessed the social desirability of the four target goals, in two ways. First, participants rated how important or desirable they think each goal is to “most people in your age group,” using the same scale as above (Emmons, 1999). Second, they rated “How important or desirable you think each goal is to your parents?” using the same scale. Again, we intended to use these ratings to examine whether effects attributed to an



OVP might be reducible to desires to move towards what one thinks one's peers value, or towards what one thinks one's parents value.

The second questionnaire, given six weeks later, presented the target goals again. Participants first read, "Six weeks ago you rated how important each goal was to you. In this task, try to remember your earlier ratings, that is, *exactly reproduce* your earlier ratings." The same scale as before was employed. Next, participants read, "It is possible that you have changed your mind about some of the goals. For the task below please put aside your ratings of six weeks ago, and also put aside your recollections above. Then rate the goals afresh: at the current time, which seems most important to you? Your responses may or may not be different from before."

*Intrinsic value orientation.* As one way of assessing trait-level value orientations, we used the Aspirations Index, a 30-item measure of both intrinsic and extrinsic value preferences (see Kasser & Ryan, 1996, 2001; Sheldon & McGregor, 2000). Participants rated the importance of each of the 30 aspirations, using a 1 (*not at all important*) to 5 (*very important*) scale (examples include "I will be financially successful" and "I will have good friends I can count on"). A relative intrinsic value orientation score was computed by summing the 15 intrinsic items and subtracting the 15 extrinsic items ( $\alpha = .88$ ).

*Cultural value orientation.* Participants were also administered Triandis and Gelfands' (1998) cultural value orientation measure. In the analyses below, we focus on horizontal collectivism, the tendency to orient in an egalitarian manner towards important others, traditions, and social groups, and vertical individualism, the tendency to pursue self-interest in a competitive and perhaps asocial manner. Each construct was measured with four items (examples are "If a coworker gets a prize, I would feel proud" and "It is important that I do my job better than others," respectively;  $\alpha$  coefficients were .68 and .61).

*Social value orientation.* We also used the Ring measure of social value orientation to measure trait-level value orientation, a measure based on social dilemma theory (Liebrand, 1984). In this measure, participants make 24 choices concerning which pair of point outcomes they prefer for self and a hypothetical other. For example, in one of the 24 choices, one of the options allocates 79 points to self and 61 to other and the other option allocates 92 points to self and 38 to other. Depending on their pattern of choices, participants are typed as cooperators (preferring to maximize joint gain), individualists (preferring to maximize personal gain), or competitors (preferring to maximize personal gain relative to

other's gain; see Liebrand, 1984 or Sheldon, 1999 for further scoring information). In the current data, 49 participants were classified as cooperators, 82 as individualists, and 44 as competitors; 21 participants were unclassifiable, which is typical of this measure.

*SWB.* SWB at Time 1 was assessed using the 20-item positive affect/negative affect schedule (PANAS; Watson, Tellegen, & Clark, 1988) and the 5-item Satisfaction with Life Scale (Diener, Emmons, Larsen, & Griffin, 1985). As in recent work and theorizing (Diener, 1994; Elliot & Sheldon, 1996, 1998; Sheldon & Kasser, 2001), we computed an aggregate SWB index by summing positive affect and life-satisfaction, and subtracting negative affect ( $\alpha = .86$ , computed after re-coding the negative affect items).

## RESULTS

### Preliminary Analyses

First, we conducted a principal components analysis of the four target goal importance ratings, separately for the Time 1, Time 2, and Time 3 ratings. In each analysis, two factors emerged, together accounting for 73 % of the variance at Time 1, 70 % of the variance at Time 2, and 72 % of the variance at Time 3. Varimax rotation revealed that the intrinsic and extrinsic items loaded cleanly on different factors (all loadings .76 or above; no cross-loadings greater than .25). Thus, we created separate intrinsic and extrinsic importance scores for each time period by averaging the relevant two ratings.

As a second preliminary analysis, we examined the association of Time 1 intrinsic (vs. extrinsic) target goal endorsement with Time 1 SWB, attempting to replicate past findings of a positive concurrent association between strong intrinsic valuing and SWB. Following Kasser and Ryan's (1996) procedure, we regressed SWB upon both the intrinsic importance score and a total importance score derived by averaging intrinsic and extrinsic importance (this procedure controls for the person's overall importance rating and focuses the analysis on the *relative* importance of intrinsic goals, a crucial point according to Kasser and Ryan, 1996). Intrinsic importance emerged with a significant positive effect ( $\beta = .20$ ,  $p < .02$ ; the total importance score was nonsignificant). This supports our baseline assumption that intrinsic goals may be more beneficial or healthy.

As a third preliminary analysis, we examined the test-retest coefficients for the initial choices and the revised choices, for both intrinsic and extrinsic goals. Would participants evidence substantial rank-order stability, as would be expected given our assumption that these measures provide valid information about participants' personalities? These analyses revealed that they do, as test-retest correlations ranged between .50 and .65 for these two-item measures. Of course, rank-order stability is not the same as mean-level stability; again, the current studies focus conceptually on mean-level stability, predicting directional shifts in sample means over time.

### Primary Analyses

To test our primary hypotheses, we conducted repeated measures MANOVAs with content (intrinsic vs. extrinsic) and time (Time 1 vs. Time 2) as two within-subject factors. Two MANOVAs were conducted, both of which included the initial intrinsic and extrinsic importance ratings, but one of which also included the remembered importance ratings made six weeks later, and the other of which included the revised importance ratings made six weeks later. Again, we reasoned that if there is an OVP that prompts people to move towards SWB-conducive goals and away from goals problematic for SWB, then there should be significant content  $\times$  time interactions such that extrinsic goals decrease in remembered and revised importance, whereas intrinsic goals increase.

Table 1 presents the mean differences that emerged. Consistent with past findings that people generally prefer intrinsic goals (see Kasser, 2002), extrinsic goals were rated as less important, overall (for the remembered importance analysis,  $F [1,195] = 428.3, p < .01$ ; for the revised importance analysis,  $F [1,195] = 408.7, p < .01$ ). Supporting our primary hypotheses, significant content  $\times$  time interactions emerged in both MANOVAs (for the remembered importance analysis,  $F [1,195] = 21.90, p < .01$ ; for the revised importance analysis,  $F [1,195] = 20.90, p < .01$ ). Follow-up, paired-sample  $t$ -tests comparing initial importance to remembered and revised importance ratings revealed significant effects for intrinsic goals ( $t[195] = 2.55$  for the remembered importance analysis,  $p = .01$ , and  $t[195] = 4.21$  for the revised importance analysis,  $p < .01$ ); for extrinsic goals, the effect was significant for both the remembered

**Table 1**  
Study 1: Initial, Remembered, and Revised Importance Ratings for  
Intrinsic and Extrinsic Goals

Type of Goal	Type of Rating				
	Time 1 Importance	Remembered Importance		Revised Importance	
		Time 2	Time 3	Time 2	Time 3
Extrinsic Goals	5.87	5.41	5.58	5.57	5.69
Intrinsic Goals	8.61	8.81	8.70	9.01	8.84

importance analysis ( $t[195] = 4.31, p < .01$ ), and the revised importance analysis ( $t[195] = 2.68, p < .01$ ). In short, consistent with the hypothesis that people have an OVP that biases them to move towards SWB-relevant goals, participants' recollections and revised ratings regarding intrinsic goals increased over the 6-week period, whereas they tended to decrease for extrinsic goals.

**Supplementary Analyses**

*Controlling for social and parental desirability.* Next, we repeated the two MANOVAs, adding four covariates to each: the rated social desirability and parental desirability of both intrinsic goals and extrinsic goals. It was possible that these covariates could account for the above effects, as the rated importance of intrinsic goals at time 1 correlated with both the social desirability and the parental desirability of intrinsic goals ( $r_s = .21$  and  $.30$ ), and the initial rated importance of extrinsic goals correlated with the parental desirability of extrinsic goals ( $r = .41$ , all three  $ps < .01$ ; extrinsic goal importance was not correlated with extrinsic goal social desirability,  $p > .10$ ). However, with these four variables controlled, the content  $\times$  time interaction remained significant both for the remembered importance analysis ( $F [1,194] = 10.32, p < .01$ ) and also for the revised importance analysis ( $F [1,194] = 8.98, p < .01$ ;  $t$ -test comparisons were essentially unchanged). This suggests that these constructs cannot explain the effects that we attribute to a positively biased OVP.

*Testing for interactions with trait-level values measures.* To examine whether the above biased changes hold for all participants or merely for those with a predominantly prosocial value orientation, we conducted MANCOVAs specifying either intrinsic value orientation ( $n = 196$ ), horizontal collectivism ( $n = 170$ ), vertical individualism ( $n = 170$ ), or social value orientation ( $n = 175$ ) as a covariate. Eight MANCOVAs were conducted in all, four for the memory ratings and four for the revised choice ratings. The primary purpose was to evaluate whether trait-level values interact with the 2-way interaction between content and time.

In each analysis we first evaluated the 2-way interaction between trait values and content. Would those with more prosocial values evidence a stronger preference for intrinsic goals overall? Not surprisingly, given that similar constructs were involved (at trait and state levels, respectively), the analyses indeed revealed value orientation  $\times$  content interactions in all eight analyses, such that those with a stronger intrinsic or collectivist value orientation gave greater endorsement to the intrinsic target goals at both times and those with competitive or vertical individualist value orientations gave greater endorsement to extrinsic target goals at both times ( $F$ s ranging from 16.88 to 260.62, all  $ps < .01$ ).

More important were the 3-way interactions. The 3-way interaction was significant in three of the eight analyses (for revised importance and horizontal collectivism,  $F [1,168] = 4.50, p < .05$ ; for remembered importance and horizontal collectivism,  $F [1,168] = 15.79, p < .01$ ; for remembered importance and social value orientation,  $F [1,173] = 4.23, p < .05$ ), and marginally significant in another analysis (for revised importance and intrinsic value orientation,  $F [1,193] = 3.15, p < .08$ ). The form of the interaction was similar in all four cases: those with less horizontal collectivist values, more extrinsic values, and more competitive values evidenced the greatest shift towards intrinsic values and the greatest shift away from extrinsic values. Table 2 provides the means for the social value orientation variable and the remembered importance analyses, which illustrate the general pattern. In short, rather than supporting a “matching” perspective, which says that participants should shift further towards their preexisting preferences, these data instead suggest that those with competitive or extrinsic values shift away from their preferences, in the direction most likely to support SWB.

Table 2

Study 1: Initial and Remembered Importance Ratings for Intrinsic and Extrinsic Goals, Split by Social Value Orientation (Cooperator, Individualist, or Competitor)

Type of Goal	Type of Rating					
	Initial Importance			Remembered Importance		
	SVO			SVO		
	Coops	Indvs	Comps	Coops	Indvs	Comps
Extrinsic Goals	5.01	6.00	6.02	4.84	5.59	5.44
Intrinsic Goals	9.06	8.59	7.98	8.98	8.92	8.40

*Evaluating the stability of change at Time 3.* As a final supplementary analysis, we examined the Time 3 ratings. Would the changes from Time 1 to Time 2 remain stable? To evaluate this, we conducted four paired-sample *t*-tests, comparing the Time 3 remembered and revised importance ratings for the intrinsic and extrinsic goals to the appropriate Time 2 importance ratings, using the 172 participants for whom we had Time 3 data. Table 1 contains the means. Although the Time 3 means moved slightly back in the direction of the Time 1 means, none of the differences between Time 2 and Time 3 were significant, indicating that the Time 1/Time 2 shift towards intrinsic and away from extrinsic goals persisted at Time 3.<sup>1</sup>

Brief Discussion

Study 1 found preliminary support for our basic hypotheses. In brief, participants evidenced a tendency to shift their endorsements towards intrinsic goals and away from extrinsic goals over a six-week period. This change could not be accounted for by ratings of social and parental desirability and persisted at a third time of

1. Paired-sample *t*-tests revealed that remembered importance and revised importance at Time 3 differed from initial importance, for both extrinsic and intrinsic goals, in seven out of eight cases (all *ps* < .05); the exception was that intrinsic remembered importance at Time 3 was not significantly different from intrinsic importance at Time 1.

measurement, six weeks later. In addition, the change was either unmoderated by participants' trait-level value orientations or moderated in a way that suggests that those with less SWB-conducive values are especially likely to shift in the beneficial direction.

## STUDY 2

In Study 2 we sought to replicate the basic Study 1 findings, while ascertaining whether the reappraisal that we attribute to the OVP can occur over a much shorter time period. Specifically, we asked participants to recall, and perhaps revise, their initial ratings only 20 minutes after the first set of ratings (following a distraction task). As another innovation in Study 2, we measured the underlying motives that participants might have for pursuing each of the four target goals. As noted in the introduction, some have argued that negative effects of extrinsic goals are not due to their content per se, but rather, to the fact that they are often pursued for reasons of personal insecurity or unpleasant external necessity (Carver & Baird, 1998; Srivastava et al., 2001). Although we agree that insecurities and compulsions (i.e. non-autonomous motivations) are often associated with extrinsic goals, we do not believe that this completely accounts for the negative effects of such goals, instead finding that both factors have distinct effects (Ryan et al., 1996; Sheldon et al., in press). To test this, we asked participants to rate the extent they would pursue each goal due to environmental forces and introjected compulsions (Sheldon & Kasser, 1995, 1998, 2001). We predicted that controlling for the nonautonomous motivation effects would not eliminate the effect of intrinsic versus extrinsic goal content upon changes over time.

## METHODS

### Participants and Procedure

Participants were 97 introductory psychology students at the University of Missouri-Columbia, who took part in the study to satisfy a course requirement. Participants came to a single evening group session, in which they first completed a questionnaire containing target goal-importance ratings. After the questionnaire was taken away, participants completed filler tasks that consisted of various personality-related writing

exercises.<sup>2</sup> Finally, a questionnaire was given that contained the target goals again as well as the motive questions. Afterwards, participants were debriefed and released.

As in Study 1, the first questionnaire asked participants to rate the importance of the same two intrinsic target goals used in Study 1 (intimacy and communal) and the same two extrinsic target goals (material and popularity), using a 1 (*not at all important*) to 5 (*very important*) scale. Because participants' memory for these ratings was to be tested only 20 minutes later, we embedded the four target goals in a list containing 35 other goals to reduce their immediate salience.

Within the third questionnaire participants read, "At the beginning of today's session, you rated the importance of each goal from a list of goals. In this task, we'd like you to try to remember some of your earlier ratings. Try to *exactly reproduce* your earlier ratings." Participants used the same scale as in the initial importance ratings and had to rely on memory since their initial responses had been taken away. Next, participants read, "It is possible that you have changed your mind about the importance of some of the goals now that you've had a chance to think about your values. For the task below please put aside your earlier ratings, and also put aside your recollections above. Then rate the goals afresh. At the current time, what seems most important to you?" Notably, these two sets of instructions are the same as those used in Study 1.

Next, participants were asked to imagine that they were pursuing each of the target goals and to rate the degree of external motivation (striving primarily because of anticipated rewards or status) and introjected motivation (striving primarily to avoid guilt or shame) they would feel in each case. Specifically, they rated the extent they would pursue each goal to "obtain later advantage or compensation as a result" and "because you 'should' do it, even if you're not sure you want to." A 1 (*not at all for this reason*) to 5 (*very much for this reason*) scale was used.

## RESULTS

### Preliminary Analyses

First, we conducted principal components analyses of the four target goal importance ratings, separately for the Time 1 and the Time 2 ratings. In each analysis, two factors emerged, together accounting

2. These exercises pertained to various topics, such as different types of interpersonal relationships. However, they had no effect on the data reported here and will not be discussed further.



for 72 % of the variance at Time 1 and 76 % of the variance at Time 2. Varimax rotation revealed that the intrinsic and extrinsic items loaded cleanly on the expected factors for the Time 2 ratings (all loadings .76 or above; no cross-loadings greater than .34). However, the emotional intimacy item at Time 1 loaded more strongly on the extrinsic factor. We suggest this occurred because this item was separated from the other three items, appearing near the end of the list of 39 goals. Thus we believe that the Time 2 factor structure, which was also consistent with the Time 1 and Time 2 factor structures found in Study 1, more accurately represents the true factor structure.<sup>3</sup> Accordingly, we averaged the items to create separate intrinsic and extrinsic importance scores for each time period.

Next, we examined the test-retest coefficients for the initial importance and revised importance ratings. Expectedly, given that the measurements were made only 20 minutes apart, these coefficients were quite high (.76 and .82 for the intrinsic and extrinsic goals, respectively). Again, however, we were focused on mean-level stability rather than rank-order stability.

### Primary Analyses

To test our primary hypotheses, we conducted repeated measures MANOVAs with content (intrinsic vs. extrinsic) and time (Time 1 vs. Time 2) as within-subject factors. Two MANOVAs were conducted, both of which included the initial intrinsic and extrinsic importance ratings (but one also included the remembered importance ratings, and the other, the revised importance ratings). Again, we reasoned that if there is an OVP that prompts people to move towards SWB-conducive goals and away from goals problematic for SWB, then there should be significant content  $\times$  time interactions.

Table 3 presents the mean differences that emerged. Again, consistent with past findings in the SDT tradition, extrinsic goals were rated as less important overall (the content main effect was

3. Supplementary analyses supported this conclusion, in that the emotional intimacy item followed the same pattern of increases over time as the other intrinsic item, and when the item was instead included in the extrinsic composites, content  $\times$  time interaction effects were eliminated. Content  $\times$  time interaction effects were largely unchanged when the emotional intimacy item was excluded from the intrinsic composite.

**Table 3**  
Study 2: Initial, Remembered, and Revised Importance Ratings for  
Intrinsic and Extrinsic Goals

Type of Goal	Type of Rating		
	Initial Importance	Remembered Importance	Revised Importance
Extrinsic Goals	6.72	6.68	6.72
Intrinsic Goals	8.32	8.56	8.74

*Note.* Remembered importance and revised importance were significantly different from initial importance for the intrinsic goals, but not the extrinsic goals.

significant in the memory analysis,  $F [1,96] = 63.98, p < .01$ , and in the revised importance analysis,  $F [1,96] = 60.46, p < .01$ ). Consistent with our primary hypotheses, a significant content  $\times$  time interaction emerged in the MANOVA for the remembered importance analysis,  $F [1,96] = 4.04, p < .05$ . Furthermore, a significant interaction emerged for the revised importance analysis,  $F [1,96] = 3.94, p = .05$ . Follow-up, paired-sample  $t$ -tests, comparing initial importance to remembered and revised importance ratings, revealed significant effects for intrinsic goals ( $t[96] = 2.69$  for the memory analysis,  $p < .01$ , and  $t[96] = 3.74$  for the revised rating analysis,  $p < .01$ ). Neither comparison was significant for the extrinsic goals. This suggests that at this short (20-minute) time frame, the OVP may prompt movement towards intrinsic goals more than movement away from extrinsic goals.

**Supplementary Analyses**

Next, we repeated the above two MANOVAs, adding four covariates: the rated external and introjected motivation of both intrinsic and extrinsic goals. It was possible that these covariates could account for the above effects, as the rated importance of extrinsic goals at Time 1 correlated with both introjected and external motivation for these goals ( $r_s = .33$  and  $.34$ , both  $ps < .01$ ; the rated importance of intrinsic goals at time 1 did not correlate with introjected or external motivation for those goals). However, with these four variables controlled, the content  $\times$  time interaction

was essentially unchanged for the remembered importance analysis ( $F [1,96] = 6.14$ ,  $p = .015$ ) and the revised choice analysis ( $F [1,96] = 3.67$ ,  $p = .058$ ;  $t$ -statistics for the comparisons were also unchanged). These results suggest that nonautonomous motivations associated with intrinsic or extrinsic goal contents cannot account for the relatively different changes that occur for intrinsic versus extrinsic goals, effects that we attribute to a positively biased OVP.

### Brief Discussion

Study 2 attempted to replicate the Study 1 effects over a much shorter period of time. The study again found the predicted time by content interactions, such that participants increased their endorsements of intrinsic goals over time, whereas endorsements of extrinsic goals were unchanged. In addition, Study 2 demonstrated that the effects were independent of the perceived motives associated with goals.

### STUDY 3

Study 3 was also short-term, conducted within a single experimental session. However, the study contained several changes and extensions that allowed us to address some limitations of the first two studies. First, we used a computer methodology rather than a paper-and-pencil methodology. In addition to providing more control over stimulus presentation, this also allowed us to examine the response times associated with memory judgments. Past response latency research indicates that participants are slower to respond when they feel implicit ambivalence regarding the stimulus they are considering (Fazio, 1990; Greenwald, McGhee, & Schwartz, 1998; Temple & Geisinger, 1990; Tryon & Mulloy, 1993). If there is an OVP, it seems logical that it would operate by inducing ambivalence and thereby creating hesitation, especially in the case of potentially problematic stimuli (such as extrinsic goals).

As a second change from Study 2, we used a dichotomous choice procedure, rather than a rating procedure, in order to evaluate participants' attitudes towards goals. We believed this procedure might help us generalize the earlier effects to situations in which people reach a decision point at which they must commit themselves, yes or no, to a goal (Gollwitzer, 1990). The question is, after making

such a commitment, are participants more likely to forget or revise that commitment later in the case of extrinsic goals?

As a third change from the earlier studies we used eight extrinsic and eight intrinsic goals to assess these two constructs, rather than two goals for each. We believed that this would help establish generalizability to other exemplars of the constructs. Notably, the previous studies used the goals of “Be admired by many others” and “Have many nice things” to represent extrinsic strivings and the goals of “Help those who need it” and “Have people I feel close to” to represent intrinsic strivings. Thus, the intrinsic goals were exclusively social, whereas the extrinsic goals are not. In Study 3, the set of intrinsic goals also included nonsocial exemplars (i.e. personal growth goals), consistent with past measures of the construct (Kasser, 2002).

As a fourth change from the earlier studies, we assessed participants’ memories regarding their initial choices a second time. In accord with typical response latency research procedures (Fazio, 1990), the first memory task was speeded—that is, participants responded “as quickly as they could” during the computer procedure. However, the second memory task was not speeded and was given after the computer procedure was completed, using a paper-and-pencil methodology similar to Studies 1 and 2. In addition to giving us a second chance to replicate the primary findings of Studies 1 and 2, this methodology again enabled us to examine the stability of any changes, as in Study 1. Would any shifts from Time 1 to Time 2 be maintained at Time 3 or would participants instead tend to regress back to their original scores?

As a fifth change from Studies 1 and 2, we examined whether OVP effects would persist when we controlled for participants’ initial identification with, and expected enjoyment of, each goal. Although Study 2 established that content effects persist when negative or nonautonomous motives are taken into account, we reasoned that it was important to show that effects also persist when positive or autonomous motivations are taken into account.

As a final change, we used the goal-identification and goal-enjoyment ratings as grouping variables for enacting a forced choice procedure. As will be described in more detail below, participants were constrained to make initial goal choices from constructed sets of goals, which were systematically varied by high and low levels of rated identification and enjoyment. This was done to enhance the

potential for change to occur from the beginning to the end of the experimental session (because test-retest coefficients for Study 2 were in the .70s and .80s, which allowed relatively little room for change and its prediction). The basic question remains the same with this procedure: When participants alter their responses regarding goals, do they move toward intrinsic goals and away from extrinsic goals, or do they instead change randomly? If there is no positively biased OVP, then there should be no net movement in either direction, but if there is, then there should be movement in the SWB-relevant direction.

## METHODS

### Participants and General Procedure

Participants were 64 social psychology students at the University of Missouri, who participated to satisfy a course requirement. Participants reported to the laboratory, one at a time, where they were told, "Today, we're studying the kinds of goals and values that people pursue in life, and also studying how these relate to their ability to concentrate on small details." Then, they were seated in front of a computer. The program led participants through a variety of procedures involving a list of 32 goals. Midway through the computer procedure, participants stopped to complete a paper-and-pencil task involving attention to details; they then returned to the computer. After completing the computer procedure, they did final paper-and-pencil tasks. Below we describe the computer program and overall procedure in more detail.

### The PANTER Program and Procedure

The PANTER program (process-analytic neuroticism test), originally developed by Julius Kuhl and colleagues (Kuhl & Kazen, 1994; Kuhl & Baumann, 2000), was adapted for use in Study 3. This program presents a series of semantic elements (such as various "office activities;" Baumann & Kuhl, 2002) and asks participants to make a variety of judgments and decisions about these elements. Elements are presented in different random orders during each pass through the program. A set of eight extrinsic goals was chosen for incorporation into the PANTER program, as was a set of eight intrinsic goals (see Appendix A for the list).

At the beginning of the computer procedure participants, read, "First we will show you some values or life-goals and ask you to make ratings about them. For each goal, imagine that you are pursuing it." Participants rated the degree they *identified* with the goal ("How well

do you feel this goal would fit you and your personal values? That is, how well would this goal express your core beliefs?"). They also rated how much they would expect to *enjoy* working on each goal ("How much would you enjoy pursuing it? That is, how interesting and fun would it be to pursue this goal?"). Both of these constructs are aspects of autonomous motivation, according to self-determination theory (Deci & Ryan, 1991). A 0 (*not at all*) to 9 (*very much*) scale was used.

Participants next read, "In the upcoming task we will ask you to pick half of the goals as ones you think are best, at this point in time. That is, which goals do you currently think are best for you?" Goals were presented in sets of four, and participants selected two from each set. The PANTER program constructed the goal sets so that all possible combinations of the two rating dimensions were created. Thus, participants were either asked to pick two out of four high identified/high enjoyment goals (based on their own prior ratings), two out of four high identified/low enjoyment goals, two out of four low identified/high enjoyment goals, or two out of four low identified/low enjoyment goals. Again, this balancing procedure was intended to enhance the potential for dynamic movement or change.

After making these initial choices, participants were turned away from the computer and given the paper-and-pencil d-2 task (Brickencamp, 1962) to remove their goal choices and the recommendations from focal attention. This detail-intensive task requires participants to cross out particular symbols that do not meet certain criteria from many different symbol sets. To enhance their concentration, we asked participants to work swiftly and to complete as many symbol sets as possible during a 5-minute period.

Following this task, participants were returned to the program where they were asked to remember objectively, for each of the goals, whether it was one they actually chose earlier in the session. As noted above, participants were asked to make these recognition judgments "as quickly as they could." The 32 goals were presented one at a time, again in random order, and participants' response times, as well as their selections, were recorded. Participants were not constrained in terms of how many goals they could say they chose before. These responses constitute the *speeded memory* variables.

As a last step in the computer procedure, participants were presented with the list of goals and asked to make final choices regarding which "now seem most appropriate for you to work on" following the session. They were instructed to pick half the goals on the list. These responses constitute the *revised choice* variables.

Following the computer procedure participants were seated at a different table and given a paper-and-pencil questionnaire containing the

full list of goals. They were asked to try again to recall which goals they initially chose during the computer procedure. These responses constitute the *final memory* variables.

## RESULTS

### Preliminary Analyses

We first conducted a principal components factor analysis of the 16 initial identification ratings (identification ratings were used because participants were not asked to rate directly each goal's importance in Study 3, as in Studies 1 and 2). Although two factors emerged (intrinsic and extrinsic), two items had cross-loadings. Follow-up analyses yielded a set of 12 items (six of each type) that loaded cleanly on the two factors with no cross-loading. However, our primary analyses (described below) yielded the same results across the 12- and the 16-item sets. Thus, in the interest of comprehensiveness, we decided to retain all 16 initial items (see Appendix A).

As a second preliminary analysis, we examined participants' initial autonomy ratings, as a function of intrinsic versus extrinsic content. Consistent with past cross-sectional results (Kasser & Ryan, 2001, Sheldon & Kasser, 1995), participants rated stronger identification with intrinsic goals ( $M = 7.30$  vs  $M = 5.11$ ,  $t = 8.64$ ,  $p < .01$ ), and rated more expected enjoyment of intrinsic goals ( $M = 7.51$  vs  $M = 6.62$ ,  $t = 3.98$ ,  $p < .01$ ).

### Primary Analyses

*Analytical procedure.* In order to test our primary hypotheses, we created a series of aggregate variables of both intrinsic and extrinsic types for each participant by averaging across the eight scores of each type. For example, the percentage of intrinsic and extrinsic goals initially chosen was calculated for each participant, as was the number of intrinsic and extrinsic goals identified (correctly or incorrectly) as chosen before,<sup>4</sup> the aggregate response time for each

4. Again, participants were unconstrained in the speeded memory task and could pick more than 50% of the goals if they so chose. In fact, they said "yes" to 66% of the goals on average during the speeded memory trial, yes responses being given at the rate of 40% extrinsic and 60% intrinsic. For the analyses below, we employ the percentage of yes responses the participant made for intrinsic and extrinsic goals, putting these two variables on the same 100-point scale as the other variables.

**Table 4**  
Study 3: Initial, Remembered, and Revised Choices for Intrinsic and Extrinsic Goals

Type of Goal	Type of Judgment			
	Initial Choice	Speeded Memory	Revised Choice	Final Choice
Extrinsic Goals	.41	.40	.34	.33
Intrinsic Goals	.59	.60	.66	.68

*Note.* Entries represent the percentage of “yes” choices made regarding intrinsic and extrinsic goals. Revised choice and final memory variables were significantly different from the corresponding initial choice variables, whereas Speeded memory variables were not.

type of goal, and so on. These variables were entered into repeated measures MANOVAs similar to those conducted in Studies 1 and 2, in which both content (extrinsic vs. intrinsic) and time (Time 1 vs. Time 2) were specified as within-subject factors. Again, the OVP concept predicts significant content  $\times$  time interactions such that intrinsic goals are approached and extrinsic goals are rejected. In later supplementary analyses, the autonomous motivation variables were entered into these MANOVAs as covariates.

Once again, there were significant main effects of content in all analyses, such that intrinsic goals were generally preferred (all  $ps < .01$ ; see Table 4 for the means). Contrary to predictions, no significant content  $\times$  time effect emerged in the comparison between initial choice and speeded memory ( $F[1, 63] = .08, ns$ ). However, the predicted interaction effect was found for the comparison between initial choice and final memory ( $F[1, 63] = 11.21, p < .01$ ; paired contrasts showed significant differences both for the increase in intrinsic goals,  $t[63] = 2.77, p < .01$ , and for the decrease in extrinsic goals,  $t[63] = 2.81, p < .01$ ). The interaction effect was also found for the comparison between initial choice and revised choice ( $F[1, 63] = 8.44, p < .01$ ; here, paired contrasts also showed significant differences both for the increase in intrinsic goals,  $t(63) = 2.50, p < .05$ , and the decrease in extrinsic goals,  $t[63] = 2.40, p < .05$ ), relative to their initial ratings. In sum, there was significant movement towards intrinsic goals and away from extrinsic goals in two out of three tests involving the initial choice variables.



Notably, there were no changes between the revised choice variables and the final memory variables (all  $t$ s < 1). Thus, consistent with Study 1, participants showed neither regression nor further change after the initial change, but instead evidenced stability regarding that initial change.

### Supplementary Analyses

We then repeated the above analyses while controlling for autonomous motivation (i.e. identification and enjoyment ratings, for both intrinsic and extrinsic goals). The content  $\times$  time interaction remained nonsignificant in the analysis comparing initial choices and speeded memory ( $F < 1$ ). However, the interaction remained significant in the analysis comparing initial choices to revised choices ( $F [1,63] = 8.45, p < .01$ ) and in the analysis comparing initial choices to final memory ( $F [1,63] = 7.58, p < .01$ ;  $t$ -statistics for the comparisons were essentially unchanged).

As a final supplementary analysis, we examined the effect of goal content upon participants' response times during the speeded memory task, using a paired-sample  $t$ -test comparing average response time for intrinsic goals to the average response time for extrinsic goals. Again, we hypothesized that response times would be longer for extrinsic goals than for intrinsic goals because the OVP is more likely to cause hesitation due to the negative implications of extrinsic goals for SWB. Such an effect was indeed observed ( $M$ s = 1541.30 ms for extrinsic goals, and 1392.28 ms for intrinsic goals;  $t[63] = 2.69, p < .01$ ). It appears that extrinsic goals may induce implicit hesitation relative to intrinsic goals.

## DISCUSSION

### Summary of Findings

In this article we have tried to test the idea that people tend to move in actualizing and SWB-relevant directions over time, just as classical humanistic psychology claims—a claim which has, unfortunately, received little empirical attention. In three studies, participants evidenced relatively greater ratings shifts towards intrinsic goals (shown by prior research to promote SWB) and shifts away from extrinsic goals (shown by prior research to be problematic for SWB), in both short-term and longer-term designs.

In addition, we found evidence (in Studies 1 and 3) that the positive shifts are stable, at least through a third round of testing.<sup>5</sup> Moreover, we found evidence that decisions regarding extrinsic goals take longer, consistent with the notion that the OVP causes people to “sit up and take notice” when SWB-relevant decisions are involved. Further, we were able to rule out several alternative explanations for these effects, including social desirability, parental desirability, and underlying autonomous or nonautonomous motives. Finally, we also showed that the effects are not confined merely to those with trait-level competitive or extrinsic value orientations; instead, participants high on these variables actually shifted the *most* towards intrinsic and away from extrinsic values. Although this is the opposite of what would be expected from a straightforward matching perspective, it is exactly what would be expected from an “unmet needs” perspective, in which those holding unrewarding values are most in need of SWB-relevant motivational change and are thus most likely to evidence such change.

In short, it appears that people really do have some idea about what kinds of goals are most likely to be beneficial for their SWB, presumably because they possess an OVP. Indeed, this conclusion is not as panglossian as it may seem to some—again, most people report being fairly happy (Myers, 2000), most people evidence positive developmental change over their life spans (Ryff & Keyes, 1995, Sheldon & Kasser, 2001), and most people display remarkable resilience in their daily lives (Masten, 2001). An ability to make SWB-relevant decisions, and to alter one’s decisions over time towards goals more likely to be productive of SWB, seems one logical source of these effects.

It is important to articulate, however, what we are *not* saying. First, we do not believe that intrinsic goals are a certain route to SWB, nor that extrinsic goals are a certain route away from it. The typical correlation of .25 to .30 between these constructs

5. The reader might ask, “What happens afterwards to the Study 1 and 3 participants who changed, then maintained the change? Is this as far as they can go, or can they perhaps go farther?” We assume that, given continuously supportive conditions as well as time for consolidation and further experience, individuals can potentially make positive changes throughout life. Of course, this is likely to be an uncommon trajectory; most individuals doubtless “backslide” at times, on the road to maturity and generativity.

and SWB indicate that there are plenty of exceptions to any such “rule.” Also, we do not mean to say that extrinsic goals are inappropriate to pursue; again, they can be and likely are a necessary part of life. As noted above, past extrinsic values work has focused on the *relative* importance of extrinsic compared to intrinsic goals for the person; it is only this difference that is expected, and found, to be negatively associated with SWB (as was also found in Study 1 of the current research). Also, we do not mean to say that the pursuit of SWB is the be-all and end-all of life. Ironically, SWB may be elusive to the extent people focus too centrally on it (Schooler, Ariely, & Loewenstein, 2002); it is perhaps best to keep one’s face towards worldly endeavors, without continually monitoring one’s SWB (Gaskins, 1999). Also, lest readers proclaim our SWB-focused definition of “the beneficial” to be overly self- or individual-centered, let us again note the positive associations of both SWB and intrinsic values with prosocial behavior—by and large, happy people are helpful, understanding people. Finally, we do not mean to say that people do not frequently make “mistakes” in their goal selections, devoting huge energies and large portions of their lives to futile, meaningless, or even self-destructive pursuits. We only mean to say that there is a small tendency, for most people, to move, on average, in positive directions—this is simply adaptation at work. Indeed, recognizing and appreciating such small triumphs of the human spirit may help foster a more balanced view of human nature than has been implied by much past theorizing (Sheldon & King, 2001).

### Limitations and Unanswered Questions

One limitation of our findings is that they only concern participants’ stated judgments and intentions. That is, we do not know if a person who shifts towards intrinsic goals in his/her self-reports actually behaves accordingly. However, past research has shown relatively good predictability from goals to behavior (Klinger, 1977; Gollwitzer, 1990), somewhat allaying this concern. Another limitation is that we have not shown that participants who rejected extrinsic goals or moved towards intrinsic goals over time thereby experienced gains in SWB. However, Sheldon and Kasser (2001)

demonstrated that older participants in their sample had higher SWB in part because they pursued more intrinsic goals, and Sheldon and Kasser (1998) showed that persons attaining extrinsic goals failed to obtain SWB gains, whereas persons attaining intrinsic goals did obtain SWB gains. Thus, the supposition seems reasonable in the current case. Another limitation is that we have only used a few exemplars of intrinsic and extrinsic goals; other exemplars of these categories, as well as other SWB-relevant goal-categories (such as approach vs. avoidance, Elliot & Sheldon, 1996; or intimacy vs. power, Emmons, 1991), remain to be examined. A final limitation is that we employed only relatively high-functioning samples, with adequate or better, income and resources. More research is required to establish the generalizability of these processes to more stressed, insecure, or impoverished samples, for whom a quest for extrinsic rewards may be beneficial or even essential (Biswas-Diener & Diener, 2001). Such a possibility would, of course, be broadly consistent with Maslow's (1987) proposition that "deficiency" needs can be more pressing than "being" needs.

One important conceptual question not addressed by the current data is: Why are people attracted to extrinsic goals in the first place? That is, how do we square our data, which suggest that people tend to reject extrinsic goals over time, with the enduring appeal of beauty magazines, luxury items, and material culture more generally? The final sentence of the previous paragraph supplies a clue: it may be that the underlying mechanism has to do with insecurity and peoples' response to insecurity (Kasser, Ryan, Zax, & Sameroff, 1995; Kasser, 2002). In other words, people may seek to acquire what they think others think is desirable, or what will give them a sense of approval, control, or self-esteem, at times when they are feeling uncertain about their own safety, worth, and effectiveness. Indeed, a diverse array of theoretical perspectives and lines of research indicate that people respond to threat or insecurity with defensively oriented behaviors and that these behaviors often reflect themes that the present research defines as extrinsic (e.g., Becker, 1971; Berglas & Jones, 1978; Horney, 1950; Rogers, 1961; Solomon, Greenberg, & Pyszczynski, 1991). For example, in the present research tradition, Sheldon and Krieger (2003) recently showed that new law students shift towards extrinsic and away from intrinsic values during their first year of law school, a change that was correlated with a decline in their SWB. Sheldon and Krieger argued

that traditional legal education induces profound insecurity, which serves to alienate students from their feelings, values, and ideals. Similarly, Kasser and Sheldon (2000) showed that participants became more materialistic and less cooperative when they were reminded of their mortality (see Kasser, 2002, for a review of other research of this type).<sup>6</sup> Given that insecurity and anxiety are ever-present possibilities with which the human species must contend (Becker, 1971; Solomon et al., 1991), an important challenge for future research is understanding how insecurity undermines the OVP.

Obviously, more work is also needed to understand the broader factors that can inhibit peoples' access to the OVP. Candidate factors include: cultural or gender-based norms and stereotypes that dictate what people "should" feel (Deci & Ryan, 1991); the personality trait of preoccupation/rumination in combination with negative mood states (Kuhl & Baumann, 2000), peoples' failures to develop relevant self-regulatory skills and habits (Sheldon, 2002; Sheldon & Kasser, 1998); the mass media's bombardment of individuals with materialistic messages (Kasser, 2002); and controlling or nonsupportive interpersonal contexts that fail to support individuals' autonomy (Deci & Ryan, 2000; Rogers, 1961).

To expand on the latter suggestion, Rogers (1961) postulated that the OVP may be particularly inhibited when important others or attachment figures evidence contingent or unstable regard for the person. In such a situation, people may suppress their OVP, as they seek to maintain belongingness and relatedness or to protect their positive self-feelings. In contrast, when important others give a person noncontingent positive regard, that person may be enabled to best access the OVP (Rogers, 1961). Some recent research is broadly consistent with this idea. Arndt, Schimel, Greenberg, and Pyszczynski (2002) found that when participants were given positive

6. It is also important to note that the pursuit of extrinsic values can serve other important psychological functions. For example, the pursuit of culturally valued extrinsic goals can increase self-esteem and buffer against anxiety (Greenberg et al., 1992). As another example, extrinsic values may help people to attain higher incomes, which is a moderate predictor of SWB (Diener & Oishi, 2000). Relatedly, evolutionary perspectives suggest that the acquisition of materialistic resources and other signs of status can confer distinct reproductive advantages (e.g., Geary, 1998; Gangestad, 2000).

social feedback for expressing their achievements, they showed increased conformity in aesthetic judgments; however, when participants were validated for expressing their “intrinsic” self, they showed increased self-determination in their aesthetic judgments. Research into these and other social-contextual factors that might influence the processes we have documented remains to be done.

In conclusion, it appears that people have a slight tendency to move, over time, toward SWB-supporting goals and away from goals potentially problematic for SWB. We have suggested this is due to peoples’ innate ability to recognize what types of activity are most likely to be personally beneficial. Although this may seem a rather large inference, we believe it is a reasonable one to make in light of much emerging research and theory concerning formerly underappreciated human capacities, strengths, and resiliencies (Seligman & Peterson, in press; Sheldon & King, 2001).

## Appendix A

### Intrinsic and Extrinsic Goals Incorporated Within the PANTER Program in Study 3

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#### *Extrinsic*

1. Have well-respected opinions.
2. Have many nice things.
3. Be admired by many others.
4. Be well-known to many.
5. Be financially successful.
6. Be well-liked and popular.
7. Find a good high-paying job.
8. Be able to buy all I want.

#### *Intrinsic*

1. Help those who need it.
  2. Show affection to loved ones.
  3. Feel much loved by intimates.
  4. Make others’ lives better.
  5. Be accepted for who I am.
  6. Help improve the world.
  7. Find a committed partner.
  8. Contribute something lasting.
-

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